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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,071

01/02/2008

Minoru Shibazaki

1176/320

9742

46852

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11/26/2010

LIU & LIU

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LOS ANGELES, CA 90071

EXAMINER

ARENDT, PAISLEY L

ART UNIT

PAPER NUMBER

2883

NOTIFICATION DATE

DELIVERY MODE

11/26/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/566,071	<b>Applicant(s)</b> SHIBAZAKI, MINORU	
	<b>Examiner</b> PAISLEY L. ARENDT	<b>Art Unit</b> 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/26/2006, 11/14/2007, 08/06/2010, 09/03/2010</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The disclosure is objected to because of the following informalities:

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- a. Page 7, para. [45], line 5 – “the reutilization rate of light is a” is presumed to be intended as “the reutilization rate of light is  $\alpha$ ,” as in alpha, for consistency with Fig. 2 for instance. The same goes for “a” at para. [45], line 8, and para. [46], lines 1 and 3.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation “said phase difference forming means is formed on said reflective regions in a main surface inside said liquid crystal panel on one substrate *on* the backlight-arranging side of the pair of substrates and said reflective member is formed on said phase difference forming means.” However, if said phase difference forming means is formed in a main surface *inside* said liquid crystal panel, then it is presumed that said phase difference forming means is formed on one substrate *opposite* the backlight-arranging side of the pair of substrates, as shown in Figs. 2 and 3(a).

Claim 4 is also rejected on the basis of being dependent on claim 3.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 1-5** are rejected under 35 U.S.C. 102(b) as being anticipated by Moon et al. (US 2002/0089623 A1), of record in the IDS.

Regarding **claim 1**, Moon discloses a transreflective liquid crystal display device (Fig. 8) having a liquid crystal panel (72-79, Fig. 8) in which liquid crystal material (78, Fig. 8) is sealed between a pair of substrates (72 and 79, Fig. 8) faced with each other and in which pixels (para. [0072]) formed on one substrate of said pair of substrates have transmissive regions (regions with holes in 74-77, Fig. 8) and reflective regions (regions with 74-77, Fig. 8), comprising:

a pair of circularly polarized light members (71 and 80+81, Fig. 8) arranged outside said liquid crystal panel; and

a backlight (92, Fig. 8) arranged outside one circularly polarized light member of said pair of circularly polarized light members,

wherein said reflective region has a reflective member (75, Fig. 8) for reflecting ambient light from an opposite side of [a] backlight-arranging side in said liquid crystal panel (para. [0073]), and said reflective region has [a] phase difference forming means (74, Fig. 8) arranged on the backlight-arranging side of said reflective member (see Fig. 8).

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Regarding **claim 2**, Moon discloses said phase difference forming means has a function of reversing a direction of circularly polarized light by allowing circularly polarized light to pass therethrough twice (see Fig. 8 and para. [0073]).

Regarding **claim 3**, Moon discloses said phase difference forming means is formed on said reflective regions in a main surface inside said liquid crystal panel on one substrate [opposite] the backlight-arranging side of the pair of substrates and said reflective member is formed on said phase difference forming means (see Fig. 8).

Regarding **claim 4**, Moon discloses said phase difference forming means is a retardation film for delaying phase with  $\lambda/4$  (para. [0072-0073]).

Regarding **claim 5**, Moon discloses said phase difference forming means also serves as a stepwise member for adjusting a balance between transmittance in said transmissive region and reflectance in said reflective region (see Fig. 8).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon et al. (US 2002/0089623 A1) as applied to claim 1 above, and further in view of Ozawa et al. (US 2004/0004681 A1), also of record in the IDS.

Regarding **claim 6**, Moon discloses the limitations of claim 1, as stated above, but fails to explicitly disclose said phase difference forming means is [an] orientation-processed polymer liquid crystal layer.

However, Ozawa discloses a transflective liquid crystal display device (Figs. 1-3) wherein a phase difference forming means (20, Figs. 1-3) is [an] orientation-processed polymer liquid crystal layer (para. [0026, 0029 and 0040-0041]).

It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to incorporate said phase difference forming means being [an] orientation-processed polymer liquid crystal layer, as in Ozawa, into the device of Moon since an orientation-processed polymer liquid crystal layer is well-known and commonly used in the art to form phase difference layers.

Regarding **claim 7**, Moon discloses said phase difference forming means delays phase with  $\lambda/4$  (para. [0072-0073]), but again does not disclose it is a polymer liquid crystal layer.

Again, Ozawa discloses the phase difference forming means is a polymer liquid crystal layer (para. [0026, 0029 and 0040-0041]). Ozawa also discloses the phase difference forming means delays phase with  $\lambda/4$  (para. [0023-0024]).

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It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to incorporate said phase difference forming means being a polymer liquid crystal layer, as in Ozawa, into the device of Moon since an orientation-processed polymer liquid crystal layer is well-known and commonly used in the art to form phase difference layers.

11. **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon et al. (US 2002/0089623 A1) as applied to claim 1 above, and further in view of Ha et al. (US 2001/0017679 A1), also of record in the IDS.

Regarding **claim 8**, Moon discloses said phase difference forming means is formed on said reflective regions (see Fig. 8), but fails to explicitly disclose said phase difference forming means is formed in a main surface outside said liquid crystal panel on one substrate on the backlight-arranging side of said pair of substrates.

However, Ha discloses a transfective liquid crystal display device (Fig. 5) wherein a phase difference forming means (113, Fig. 5) is formed in a main surface outside a liquid crystal panel (100, Fig. 5) on one substrate (111, Fig. 5) on a backlight-arranging side (119, Fig. 5) of a pair of substrates (101 and 111, Fig. 5).

It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to incorporate said phase difference forming means being formed in a main surface outside said liquid crystal panel on one substrate on the backlight-arranging side of said pair of substrates, as in Ha, into the device of Moon since the mere rearrangement of parts of an invention involves only routine skill in the art, and placing the phase difference layer on the



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opposite side of the transparent substrate would have no optical difference in effect of the display device.

Regarding **claim 9**, Moon discloses said phase difference forming means is a retardation film or a phase difference film for delaying phase with  $\lambda/4$  (para. [0072-0073]).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAISLEY L. ARENDT whose telephone number is 571-270-5023. The examiner can normally be reached on MON - FRI, 9:00 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Robinson can be reached on 571-272-2319. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paisley L Arendt/  
Patent Examiner, Art Unit 2883

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